TECHNOLOGY

As the home of many conventional and emerging technology industries, California has established itself as a global innovator in the development of computer and peripheral hardware, software, biotechnology and nanotechnology. The concentration of hundreds of billions of dollars of public-sector funding, venture capital, and private-sector investment into research, development, higher education institutions and business enterprises has created one of the most creative centers of innovation in the world. Recent public investment will nurture our emerging biotechnology and nanotechnology industries, assuring California's future as a world-class environment for continued technological advancement

"From the pure asset perspective, California blows everyone away. They have the brain power, the capital, the entrepreneurial base. They've been through the entrepreneurial game."

Mark Modzelewski
Executive Director
Nano Business Alliance

In addition to our already well-known global technology firms, four of the world's top 10 biotechnology companies are based in California and enjoyed sales of approximately $22 billion in 2004—nearly double their combined 2002 sales figures.[69] One-third of the nation's biotechnology firms are located in California, employing more people in biotechnology than all other states combined.[70] The bio-tech industry will continue to revolutionize the way many industries do business in the future. According to a study by the National Center for Food and Agricultural Policy, the application of biotechnology to increase crop herbicide tolerance and insect resistance could increase farm income by $206 million[71] and decrease pesticide use by 66 million pounds.[72]

Nanotechnology, the science of building products out of components that measure 100 nanometers (a billionth of a meter) or less, is expected to generate revenues of $1 trillion per year over the next 15 years.[73] California's critical mass of science and technology companies, human capital, research facilities and our venture capital investment firms have worked together to make the state the global leader in the nanotechnology industry. Recent developments in nanotechnology have led to a wide range of consumer and commercial products, such as stain-resistant Eddie Bauer nano-pants and improved ship coatings for Navy vessels.

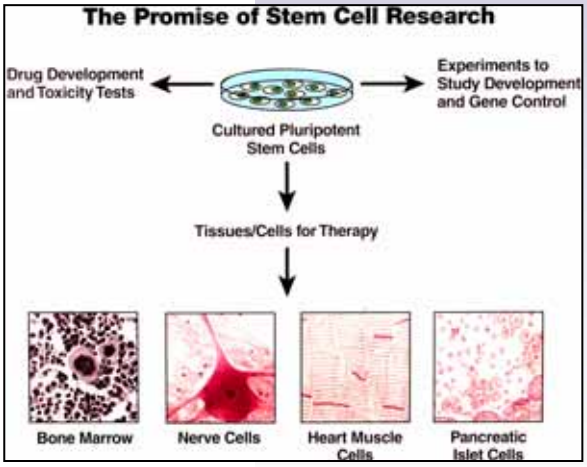

Image Credit: Stem cell research diagram, courtesy of the National Institute of Health

California must actively work to keep its high-tech industries and universities on the cutting edge of research and development. In November, California voters passed Proposition 71, the California Stem Cell Research and Cures Initiative, which provides $3 billion in state tax-exempt bonds over 10 years for stem cell research.[74] Most importantly, Prop. 71 will provide a stable political environment for the concentration of intellectual and venture capital necessary for this research to succeed. Already, the most advanced researchers in the world are flocking to California's universities and companies are opening new branch offices here. The new California "gold rush" has begun.

[69] Yahoo! Finance, "Six Month Sales Reports for Amgen, Genentech, Chiron and Invitrogen," June 30, 2004, http://finance.yahoo.com, June 2004.
[70] University of California, "Biotechnology and Genomics," June 7, 2004, http://www.universityofcalifornia.edu/research/biotech.html.
[71] Venture One, Equity Financings for U.S. Venture-Backed Companies, by Industry Group (98-2Q-2004) June 2004, http://www.ventureone.com.
[72] BIO, "Impact of Biotechnology to California," http://www.bio.org.
[73] National Science Foundation, http://www.nsf.gov, July 2004.
[74] State of California Legislative Counsel, http:/www.leginfo.ca.gov.